



SEQUENCE LISTING

<110> DUFT, BRADFORD J.
KOLTERMAN, ORVILLE G.

<120> METHODS FOR TREATING OBESITY

<130> 18528.230

<140> 09/445,517
<141> 1999-12-06

<150> 08/870,762
<151> 1997-06-06

<160> 20

<170> PatentIn Ver. 3.3

<210> 1
<211> 37
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide construct

<400> 1

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15

Val His Ser Ser Asn Asn Phe Gly Pro Val Leu Pro Pro Thr Asn Val
20 25 30

Gly Ser Asn Thr Tyr
35

<210> 2
<211> 37
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide construct

<220>

<223> 2,7-Cyclo bridge

<400> 2

Lys Asp Asn Thr Ala Thr Lys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15

Val His Ser Ser Asn Asn Phe Gly Ala Ile Leu Pro Ser Thr Asn Val
20 25 30

Gly Ser Asn Thr Tyr
35

<210> 3
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide construct

<400> 3
Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu Val
1 5 10 15

His Ser Ser Asn Asn Phe Gly Ala Ile Leu Ser Ser Thr Asn Val Gly
20 25 30

Ser Asn Thr Tyr
35

<210> 4
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide construct

<400> 4
Ala Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15

Val His Ser Ser Asn Asn Phe Gly Ala Ile Leu Ser Ser Thr Asn Val
20 25 30

Gly Ser Asn Thr Tyr
35

<210> 5
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide construct

<400> 5
Ser Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15

Val His Ser Ser Asn Asn Phe Gly Ala Ile Leu Ser Ser Thr Asn Val
20 25 30

Gly Ser Asn Thr Tyr
35

<210> 6
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide construct

<400> 6
Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15

Val His Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Ser Thr Asn Val
20 25 30

Gly Ser Asn Thr Tyr
35

<210> 7
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide construct

<400> 7
Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu Val
1 5 10 15

His Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Ser Thr Asn Val Gly
20 25 30

Ser Asn Thr Tyr
35

<210> 8
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide construct

<400> 8
Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15

Val Arg Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Ser Thr Asn Val
20 25 30

Gly Ser Asn Thr Tyr
35

<210> 9
<211> 36
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide construct

<400> 9
Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu Val
1 5 10 15

Arg Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Ser Thr Asn Val Gly
20 25 30

Ser Asn Thr Tyr
35

<210> 10
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
peptide construct

<400> 10
Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15

Val Arg Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Pro Thr Asn Val
20 25 30

Gly Ser Asn Thr Tyr
35

<210> 11
<211> 36
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide construct

<400> 11

Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu Val
1 5 10 15

Arg Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Pro Thr Asn Val Gly
20 25 30

Ser Asn Thr Tyr
35

<210> 12

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide construct

<400> 12

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15

Val His Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Pro Thr Asn Val
20 25 30

Gly Ser Asn Thr Tyr
35

<210> 13

<211> 36

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide construct

<400> 13

Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu Val
1 5 10 15

His Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Pro Thr Asn Val Gly
20 25 30

Ser Asn Thr Tyr
35

<210> 14

<211> 37

<212> PRT

```
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
      peptide construct

<220>
<221> MOD_RES
<222> (1)
<223> Lys, Ala, Ser, or not present

<220>
<221> MOD_RES
<222> (2)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (7)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (13)
<223> Ala, Ser, or Thr

<220>
<221> MOD_RES
<222> (17)
<223> Val, Leu, or Ile

<220>
<221> MOD_RES
<222> (18)
<223> His or Arg

<220>
<221> MOD_RES
<222> (19)
<223> Ser or Thr

<220>
<221> MOD_RES
<222> (20)
<223> Ser, Thr, Gln, or Asn

<220>
<221> MOD_RES
<222> (21)
<223> Asn, Gln, or His

<220>
<221> MOD_RES
<222> (23)
<223> Phe, Leu, or Tyr

<220>
```

<221> MOD_RES
<222> (26)
<223> Ile, Val, Ala, or Leu

<220>
<221> MOD_RES
<222> (29)
<223> Ser, Pro, or Thr

<220>
<221> MOD_RES
<222> (31)
<223> Asn, Asp, or Gln

<220>
<223> c-term may be amino, alkylamino, dialkylamino,
 cycloalkylamino, arylamino, aralkylamino, alkyloxy,
 aryloxy, or aralkyloxy

<220>
<223> See specification as filed for detailed description of
 substitutions and preferred embodiments

<400> 14
Xaa Xaa Asn Thr Ala Thr Xaa Ala Thr Gln Arg Leu Xaa Asn Phe Leu
 1 5 10 15

Xaa Xaa Xaa Xaa Xaa Asn Xaa Gly Pro Xaa Leu Pro Xaa Thr Xaa Val
 20 25 30

Gly Ser Asn Thr Tyr
 35

<210> 15
<211> 37
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
 peptide construct

<220>
<221> MOD_RES
<222> (1)
<223> Lys, Ala, Ser, or not present

<220>
<221> MOD_RES
<222> (2)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (7)
<223> Variable amino acid

```
<220>
<221> MOD_RES
<222> (13)
<223> Ala, Ser, or Thr

<220>
<221> MOD_RES
<222> (17)
<223> Val, Leu, or Ile

<220>
<221> MOD_RES
<222> (18)
<223> His or Arg

<220>
<221> MOD_RES
<222> (19)
<223> Ser or Thr

<220>
<221> MOD_RES
<222> (20)
<223> Ser, Thr, Gln, or Asn

<220>
<221> MOD_RES
<222> (21)
<223> Asn, Gln, or His

<220>
<221> MOD_RES
<222> (23)
<223> Phe, Leu, or Tyr

<220>
<221> MOD_RES
<222> (26)
<223> Ile, Val, Ala, or Leu

<220>
<221> MOD_RES
<222> (28)
<223> Ser, Pro, Leu, Ile, or Thr

<220>
<221> MOD_RES
<222> (31)
<223> Asn, Asp, or Gln

<220>
<223> c-term may be amino, alkylamino, dialkylamino,
      cycloalkylamino, arylamino, aralkylamino, alkyloxy,
      aryloxy, or aralkyloxy

<220>
```

<223> See specification as filed for detailed description of substitutions and preferred embodiments

<400> 15

Xaa Xaa Asn Thr Ala Thr Xaa Ala Thr Gln Arg Leu Xaa Asn Phe Leu
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Asn Xaa Gly Pro Xaa Leu Xaa Pro Thr Xaa Val
20 25 30

Gly Ser Asn Thr Tyr
35

<210> 16

<211> 37

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide construct

<220>

<221> MOD_RES

<222> (1)

<223> Lys, Ala, Ser, or not present

<220>

<221> MOD_RES

<222> (2)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (7)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (13)

<223> Ala, Ser, or Thr

<220>

<221> MOD_RES

<222> (17)

<223> Val, Leu, or Ile

<220>

<221> MOD_RES

<222> (18)

<223> His or Arg

<220>

<221> MOD_RES

<222> (19)

<223> Ser or Thr

<220>
<221> MOD_RES
<222> (20)
<223> Ser, Thr, Gln, or Asn

<220>
<221> MOD_RES
<222> (21)
<223> Asn, Gln, or His

<220>
<221> MOD_RES
<222> (23)
<223> Phe, Leu, or Tyr

<220>
<221> MOD_RES
<222> (25)
<223> Ala, or Pro

<220>
<221> MOD_RES
<222> (26)
<223> Ile, Val, Ala, or Leu

<220>
<221> MOD_RES
<222> (31)
<223> Asn, Asp, or Gln

<220>
<223> c-term may be amino, alkylamino, dialkylamino,
 cycloalkylamino, arylamino, aralkylamino, alkyloxy,
 aryloxy, or aralkyloxy

<220>
<223> See specification as filed for detailed description of
 substitutions and preferred embodiments

<400> 16
Xaa Xaa Asn Thr Ala Thr Xaa Ala Thr Gln Arg Leu Xaa Asn Phe Leu
 1 5 10 15

Xaa Xaa Xaa Xaa Xaa Asn Xaa Gly Xaa Xaa Leu Pro Pro Thr Xaa Val
 20 25 30

Gly Ser Asn Thr Tyr
 35

<210> 17
<211> 37
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide construct

<220>
<221> MOD_RES
<222> (1)
<223> Lys, Ala, Ser, or not present

<220>
<221> MOD_RES
<222> (2)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (7)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (13)
<223> Ala, Ser, or Thr

<220>
<221> MOD_RES
<222> (17)
<223> Val, Leu, or Ile

<220>
<221> MOD_RES
<222> (18)
<223> His or Arg

<220>
<221> MOD_RES
<222> (19)
<223> Ser or Thr

<220>
<221> MOD_RES
<222> (20)
<223> Ser, Thr, Gln, or Asn

<220>
<221> MOD_RES
<222> (21)
<223> Asn, Gln, or His

<220>
<221> MOD_RES
<222> (23)
<223> Phe, Leu, or Tyr

<220>
<221> MOD_RES
<222> (26)
<223> Ile, Val, Ala, or Leu

<220>
 <221> MOD_RES
 <222> (31)
 <223> Asn, Asp, or Gln

<220>
 <223> c-term may be amino, alkylamino, dialkylamino,
 cycloalkylamino, arylamino, aralkylamino, alkyloxy,
 aryloxy, or aralkyloxy

<220>
 <223> See specification as filed for detailed description of
 substitutions and preferred embodiments

<400> 17
 Xaa Xaa Asn Thr Ala Thr Xaa Ala Thr Gln Arg Leu Xaa Asn Phe Leu
 1 5 10 15

Xaa Xaa Xaa Xaa Xaa Asn Xaa Gly Pro Xaa Leu Pro Pro Thr Xaa Val
 20 25 30

Gly Ser Asn Thr Tyr
 35

<210> 18
 <211> 30
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide construct

<400> 18
 Val Thr His Arg Leu Ala Gly Leu Leu Ser Arg Ser Gly Gly Val Val
 1 5 10 15

Lys Asn Asn Phe Val Pro Thr Asn Val Gly Ser Lys Ala Phe
 20 25 30

<210> 19
 <211> 37
 <212> PRT
 <213> Rattus norvegicus

<400> 19
 Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
 1 5 10 15

Val Arg Ser Ser Asn Asn Leu Gly Pro Val Leu Pro Pro Thr Asn Val
 20 25 30

Gly Ser Asn Thr Tyr
 35

<210> 20
<211> 37
<212> PRT
<213> Homo sapiens

<400> 20
Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15
Val His Ser Ser Asn Asn Phe Gly Ala Ile Leu Ser Ser Thr Asn Val
20 25 30
Gly Ser Asn Thr Tyr
35